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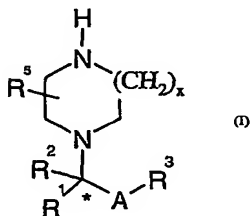
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(54) Title: PIPERAZINE DERIVATIVES WHICH EXHIBIT ACTIVITY AS SEROTONIN AND NORADRENALINE RE-UP-TAKE INHIBITORS



(57) Abstract: A compound of formula (I), wherein R¹ is H; R² is aryl, het, C₃₋₈cycloalkyl, C₁₋₆alkyl, (CH₂)₂aryl or R⁴, wherein each of the cycloalkyl, aryl, het and R⁴ groups is optionally substituted by at least one substituent independently selected from C₁₋₆alkyl, C₁₋₆alkoxy, OH, halo, CF₃, OCF₃, OCHF₂, O(CH₂)₂CF₃, CN, CONH₂, CON(H)C₁₋₆alkyl, CON(C₁₋₆alkyl)₂, hydroxy-C₁₋₆alkyl, C₁₋₆alkoxy-C₁₋₆alkyl, C₁₋₆alkoxy-C₁₋₆alkoxy, SCF₃, C₁₋₆alkylISO₂, C₁₋₆alkyl-S-C₁₋₆alkyl, C₁₋₆alkyl-S-, C₁₋₆alkylNR¹⁰R¹¹ and NR¹⁰R¹¹; or R¹ and R², together with the carbon atom to which they are bound, form a 5- or 6-membered carbocycle or a 5- or 6-membered heterocycle containing at least one N, O or S heteroatom; R³ is aryl, het or R⁴, each optionally substituted by at least one substituent independently selected from C₁₋₆alkyl, C₁₋₆alkoxy, het, OH, halo, CF₃, OCF₃, OCHF₂, O(CH₂)₂CF₃, CN, CONH₂, CON(H)C₁₋₆alkyl, CON(C₁₋₆alkyl)₂, hydroxy-C₁₋₆alkyl, C₁₋₆alkoxy-C₁₋₆alkyl, C₁₋₆alkoxy-C₁₋₆alkoxy, SCF₃, C₁₋₆alkylISO₂, C₁₋₆alkyl-S-C₁₋₆alkyl, C₁₋₆alkyl-S-, C₁₋₆alkylNR¹⁰R¹¹ and NR¹⁰R¹¹; R⁴ is a phenyl group fused to a 5- or 6 membered carbocycle, or a phenyl group fused to a 5- or 6-membered heterocycle containing at least one N, O or S heteroatom; R⁵ is H or C₁₋₆alkyl; R¹⁰ and R¹¹ are the same or different and are independently H or C₁₋₆alkyl; A is a C₁₋₃alkylene chain which is optionally substituted by OH, C₁₋₆alkyl or C₁₋₆alkoxy; x is an integer from 1 to 3; y is 1 or 2; z is an integer from 1 to 3; aryl is phenyl, naphthyl, anthracyl or phenanthryl; and het is an aromatic or non-aromatic 4-, 5- or 6-membered heterocycle which contains at least one N, O or S heteroatom, optionally fused to a 5- or 6-membered carbocycle or a second 4-, 5- or 6-membered heterocycle which contains at least one N, O or S heteroatom.